777 12th Street, 3rd Floor

SACRAMENTO METROPOLITAN
AIR QUALITY
MANAGEMENT DISTRICT

Sacramento, CA 95814

AUTHORITY TO CONSTRUCT EVALUATION

APPLICATION NO.:	A/C 23105
DATE:	July 28, 2011
ISSUING ENGINEER:	Felix Trujillo, Jr.

FACILITY NAME: Kiefer Landfill, Department of Waste Management and Recycling, County of Sacramento

LOCATION: 12701 Kiefer Blvd., Sloughhouse, CA 95683

PROPOSAL: Modify existing Permit to Operate (PO) No. 19363 for an auxiliary prime power IC engine on a street sweeper in order to replace expiring leased Emission Reduction Credits (ERCs). The ERCs were initially provided under P/O 19363 for a 5 year lease. The existing leased ERCs expire October 1, 2011 and are proposed to be replaced with new ERCs leased from the SMAQMD Priority Reserve Bank - Essential Public Services Account for a period of 3 years, effective October 1, 2011.

INTRODUCTION: The County of Sacramento, Department of Waste Management and Recycling (DWMR), operates the Kiefer Landfill, a municipal solid waste landfill. They use a street sweeper to clean paved surfaces to comply with stormwater and fugitive dust control requirements. The street sweeper has an auxiliary IC engine mounted on it to operate the vacuum system and sweeping brushes. DWMR operates the auxiliary IC engine on the street sweeper at the Kiefer Landfill.

A Permit to Operate was required for the auxiliary IC engine on the street sweeper because it did not meet the SMAQMD Rule 201 Section 111.1 exemption for vehicles. The auxiliary IC engine is not used to move the street sweeper on the roadway. The street sweeper has a primary IC engine to move it on the roadway and that IC engine is exempt from the requirement to obtain a permit by SMAQMD Rule 201 Section 111.1.

The IC engine will be evaluated as a "non-road" IC engine because it meets the U.S. EPA definition of "non-road" IC engine. The U.S. EPA definition is the same as the definition of "non-road" IC engine in SMAQMD Rule 412 Section 212. The IC engine meets the requirements specified in the definition as follows:

212.1 "is not a motor vehicle engine; and"

The IC engine is not used as a motor vehicle engine. The IC engine powers the vacuum system and sweeper brushes.

212.2 "is not regulated by a federal New Source Performance Standard promulgated under Section 111 of the Federal Clean Air Act; and"

There is no NSPS applicable to the operation of the IC engine.

212.3 "by itself or in or on a piece of equipment, is portable or transportable, meaning designed to

be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform; and"

The IC engine is mounted on the street sweeper and is therefore transportable.

212.4 "does not remain at a location for more than 12 consecutive months. Any engine, such as a back-up or stand-by engine, that replaces an engine at a location and is intended to perform the same function as the engine being replaced will be included in calculating the consecutive time period. In that case, the cumulative time of both engines, including the time between the removal of the original engine and installation of the replacement engine, would be counted toward the consecutive residence time period. In addition, an engine that is moved from its location but does not need to be moved from its location to perform its function shall be deemed to have remained at a single location. or"

The IC engine moves with the street sweeper from location to location at and near the landfill to clean the paved roadways.

EQUIPMENT DESCRIPTION:

IC Engine (SS1)

A/C No.	23105
Make:	John Deere Power Systems Group
Model:	4045TF270
EPA Family No.:	5JDXL04.5083
Date of Manufacture:	2005
Engine Type:	4-cycle
Aspiration:	Turbocharged
Engine BHP:	99 hp at 2500 rpm
Displacement:	4.5 liter
Fuel:	CARB diesel
Equipment Driven:	Vacuum system and sweeper brushes on a street sweeper

PROCESS RATE/FUEL USAGE:

The auxiliary IC engine will operate up to 520 hours/calendar quarter and combusts diesel fuel at a rate of 5.5 gallons/hour.

OPERATING SCHEDULE: The engine can potentially operate 24 hours/day and 520 hours/quarter.

CONTROL EQUIPMENT EVALUATION:

The engine is not equipped with any add-on control equipment. The IC engine is a U.S. EPA Tier 2 certified non-road IC engine.

EMISSIONS CALCULATIONS:

1. HISTORIC POTENTIAL TO EMIT:

This permit action is a non-major modification that involves replacing expiring leased ERCs in Permit to Operate No. 19363 with newly leased ERCs from the SMAQMD's Priority Reserve Bank - Essential Public Services Account. Therefore based on SMAQMD Rule 202 Section 219.1, the historical potential to emit emissions are equal to the potential to emit of the emissions unit prior to modification. The potential to emit from PO 19363 is the following:

Pollutant	Emission Factor (A) grams/hp-hr	Maximum Allowable Emissions (B)	
		Daily lb/day	Quarterly lb/quarter
ROC	0.34	1.8	39
NOx	3.98	20.9	452
SOx	0.1645	0.9	19
PM10	0.18	0.9	20
CO	1.04	5.5	118

(A) The emission factors for ROC and NOx were supplied by John Deere because the CARB Off Road Engine Certification only lists the emission factor for the combined NMHC+NOx. The emission factors for PM10 and CO are from the CARB Off Road Engine Certification for this engine model and family dated 10-04-2004. The emission factor for SOx is based on 0.05% sulfur by weight in the diesel fuel.

(B) Maximum Allowable Emissions are based on 99 hp and 520 hours/calendar quarter.

2. PROPOSED POTENTIAL TO EMIT:

There is one change in this table from the previous Permit to Operate to reflect the lower sulfur content of the diesel fuel required by the CARB ATCM for Portable IC Engines. The sulfur limit was 0.05% by weight and changed to 0.0015% by weight in 2006 (CCR 93114 and 2281).

Pollutant	Emission Factor (A) grams/hp-hr	Maximum Allowable Emissions (B)		
		Daily lb/day	Quarterly lb/quarter	Yearly lb/quarter
ROC	0.34	1.8	39	156
NOx	3.98	20.9	452	1,808
SOx	0.005	0.0	1	4
PM10	0.18	0.9	20	80
CO	1.04	5.5	118	472
GHG	511.75	1.3 tons/day	29 tons/quarter	116 tons/year

(A) The emission factors for ROC and NOx were supplied by John Deere because the CARB Off Road Engine Certification only lists the emission factor for the combined NMHC+NOx. The emission factors for PM10 and CO are from the CARB Off Road Engine Certification for this engine model and family dated 10-04-2004. The emission factor for SOx is based on 0.0015% sulfur by weight in the diesel fuel. GHG emission factor is the CO_2e emission factor as per Appendix A of CARB's Regulation for the Mandatory Reporting of Greenhouse

Gas Emissions (CCR, Title 17, Subchapter 10, Article 2, sections 95100 to 95133). All emission limits are in English units.

(B) Maximum Allowable Emissions are based on 99 hp, 24 hours/day, 520 hours/quarter. The yearly emissions are based on the cumulative quarterly emissions.

3. CALCULATION OF BACT TRIGGER:

NEI (BACT) = Net Emissions Increase
= Proposed Potential to Emit - Historic Potential to Emit

MPE = Maximum Potential Emissions on a 24-Hour Day Operation

Pollutant	NEI (BACT) (lb/quarter)	Is NEI (BACT) >0?	MPE (lb/day)	BACT Trigger Level (lb/day)	Is BACT Required?
ROC	0	No	1.8	≥10	No
NOx	0	No	20.9	≥10	No
SOx	-18	No	0.0	≥10	No
PM10	0	No	0.9	≥10	No
CO	0	No	5.5	≥550	No

4. CALCULATION OF OFFSET TRIGGER FOR ROC AND NOx:

Indicates active permit

Permit No.	Emissions Unit	Stationary Source Potential to Emit lb/quarter	
		ROC	NOx
P/O 12320	Landfill and Landfill Gas Collection System	Modified to A/C 17821	
A/C 12321	Landfill Gas Flare	Modified to A/C 14669	
P/O 13574	IC Engine No. 1	Modified to A/C 16463	
P/O 13575	IC Engine No. 2	Modified to A/C 16519	
P/O 13576	IC Engine No. 3	Modified to A/C 16520	
A/C 14669	Landfill Gas Flare	Modified to A/C 15333	
A/C 15333	Landfill Gas Flare	Modified to A/C 16062	
P/O 16026	Gasoline Dispensing Facility	Modified to A/C 20266	
A/C 16062	Landfill Gas Flare	Modified to A/C 17058	
P/O 16150	IC Engine No. 4	Modified to A/C 19705	
P/O 16151	IC Engine No. 5	Modified to A/C 20801	

Permit No.	Emissions Unit	Stationary Source Potential to Emit lb/quarter	
		ROC	NOx
P/O 16463	IC Engine No. 1	Modified to A/C 17331	
P/O 16519	IC Engine No. 2	Modified to A/C 17332	
P/O 16520	IC Engine No. 3	Modified to A/C 17333	
P/O 17058	Landfill Gas Flare	Modified to A/C 17359	
P/O 17331	IC Engine No. 1	Modified to A/C 20797	
P/O 17332	IC Engine No. 2	Modified to A/C 20798	
P/O 17333	IC Engine No. 3	Modified to A/C 20799	
P/O 17359	Landfill gas flare	Modified to A/C 19704	
P/O 17677	IC Engine No. 1	Modified to A/C 17822	
P/O 17678	IC Engine No. 2	Modified to A/C 17823	
P/O 17679	IC Engine No. 3	Modified to A/C 17824	
P/O 17728	Landfill Gas Flare	Modified to A/C 17359	
P/O 17821	Landfill and Landfill Gas Collection System	205,344	0
P/O 17822	IC Engine No. 1	Modified to A/C 17331	
P/O 17823	IC Engine No. 2	Modified to A/C 17332	
P/O 17824	IC Engine No. 3	Modified to A/C 17333	
P/O 17921	IC Engine (TSA)	Modified to A/C 19189	
P/O 17976	Trommel Screen	Modified to A/C 19188	
P/O 18184	IC Engine (GG)	Modified to A/C 21792	
P/O 18185	Green Waste Grinder	0	0
P/O 19188	Trommel Screen	0	0
P/O 19189	IC Engine (TSA)	Modified to A/C 19349	
P/O 19349	IC Engine (TSA)	Modified to A/C 21262	
P/O 19363	IC Engine (SS1) [auxiliary on Street Sweeper No. 1]	Modified to A/C 23105	
P/O 19704	Landfill Gas Flare [The total emissions from the 5 IC Engines and Landfill Gas Flare No. 1 and No. 2 are shown here as the Landfill Gas Air Pollution Control System emissions]	35,320	44,110
P/O 19705	IC Engine No. 4	Modified to A/C 20800	

Permit No.	Emissions Unit	Stationary Source Potential to Emit lb/quarter	
		ROC	NOx
P/O 20266	Gasoline Dispensing Facility	46	0
P/O 20797	IC Engine No. 1	Modified to A/C 22385	
P/O 20798	IC Engine No. 2	Modified to A/C 22386	
P/O 20799	IC Engine No. 3	Modified to A/C 22387	
P/O 20800	IC Engine No. 4	Modified to A/C 22388	
P/O 20801	IC Engine No. 5	Modified to A/C 22389	
P/O 21097	LFG Flare No. 2	See P/O 19704	
P/O 21262	IC Engine (TSA)	41	661
P/O 21792	IC Engine (GG)	Modified to A/C 22898	
P/O 21893	IC Engine (SS2) [auxiliary on Street Sweeper No. 2]	113	339
P/O 22385	IC Engine No. 1	See P/O 19704	
P/O 22386	IC Engine No. 2	See P/O 19704	
P/O 22387	IC Engine No. 3	See P/O 19704	
P/O 22388	IC Engine No. 4	See P/O 19704	
P/O 22389	IC Engine No. 5	See P/O 19704	
A/C 22419	IC engine, Standby (Well F)	241	722
A/C 22898	IC Engine (GG)	37	4,377
A/C 22922	Trommel Screen	0	0
A/C 22923	IC Engine (TSB)	294	712
A/C 23105	IC Engine (SS1) [auxiliary on Street Sweeper No. 1]	39	452
	Total	241,475	51,373
	Offset Trigger Level	≥ 5,000	≥ 5,000

5. CALCULATION OF OFFSET TRIGGER FOR SOx, PM10 AND CO:

Indicates active permit

Permit No.	Emissions Unit	Stationary Source Cumulative Emission Increase Since 01-01-77 lb/quarter		
		SO2	PM10	CO
P/O 12320	Landfill and Landfill Gas Collection System	Modified to A/C 17821		
A/C 12321	Landfill Gas Flare	Modified to A/C 14669		
P/O 13574	IC Engine No. 1	Modified to A/C 16463		
P/O 13575	IC Engine No. 2	Modified to A/C 16519		
P/O 13576	IC Engine No. 3	Modified to A/C 16520		
A/C 14669	Landfill Gas Flare	Modified to A/C 15333		
A/C 15333	Landfill Gas Flare	Modified to A/C 16062		
P/O 16026	Gasoline Dispensing Facility	Modified to A/C 20266		
A/C 16062	Landfill Gas Flare	Modified to A/C 17058		
P/O 16150	IC Engine No. 4	Modified to A/C 19705		
P/O 16151	IC Engine No. 5	Modified to A/C 20801		
P/O 16463	IC Engine No. 1	Modified to A/C 17331		
P/O 16519	IC Engine No. 2	Modified to A/C 17332		
P/O 16520	IC Engine No. 3	Modified to A/C 17333		
P/O 17058	Landfill Gas Flare	Modified to A/C 17359		
P/O 17331	IC Engine No. 1	Modified to A/C 20797		
P/O 17332	IC Engine No. 2	Modified to A/C 20798		
P/O 17333	IC Engine No. 3	Modified to A/C 20799		
P/O 17359	Landfill gas flare	Modified to A/C 19704		
P/O 17677	IC Engine No. 1	Modified to A/C 17822		
P/O 17678	IC Engine No. 2	Modified to A/C 17823		
P/O 17679	IC Engine No. 3	Modified to A/C 17824		
P/O 17728	Landfill Gas Flare	Modified to A/C 17359		
P/O 17821	Landfill and Landfill Gas Collection System	0	0	0
P/O 17822	IC Engine No. 1	Modified to A/C 17331		

Permit No.	Emissions Unit	Stationary Source Cumulative Emission Increase Since 01-01-77 lb/quarter		
		SO2	PM10	CO
P/O 17823	IC Engine No. 2	Modified to A/C 17332		
P/O 17824	IC Engine No. 3	Modified to A/C 17333		
P/O 17921	IC Engine (TSA)	Modified to A/C 19189		
P/O 17976	Trommel Screen	Modified to A/C 19188		
P/O 18184	IC Engine (GG)	Modified to A/C 21792		
P/O 18185	Green Waste Grinder	0	20	0
P/O 19188	Trommel Screen	0	334	0
P/O 19189	IC Engine (TSA)	Modified to A/C 19349		
P/O 19349	IC Engine (TSA)	Modified to A/C 21262		
P/O 19363	IC Engine (SS1) [auxiliary on Street Sweeper No. 1]	Modified to A/C 23105		
P/O 19704	Landfill Gas Flare [The total emissions from the 5 IC Engines and Landfill Gas Flare No. 1 and No. 2 are shown here as the Landfill Gas Air Pollution Control System emissions]	45,715	13,648	224,715
P/O 19705	IC Engine No. 4	Modified to A/C 20800		
P/O 20266	Gasoline Dispensing Facility	0	0	0
P/O 20797	IC Engine No. 1	Modified to A/C 22385		
P/O 20798	IC Engine No. 2	Modified to A/C 22386		
P/O 20799	IC Engine No. 3	Modified to A/C 22387		
P/O 20800	IC Engine No. 4	Modified to A/C 22388		
P/O 20801	IC Engine No. 5	Modified to A/C 22389		
P/O 21097	LFG Flare No. 2	See P/O 19704		
P/O 21262	IC Engine (TSA)	8	24	137
P/O 21792	IC Engine (GG)	Modified to A/C 22898		
A/C 21893	IC Engine (SS2) [auxiliary on Street Sweeper No. 2]	6	25	76
P/O 22385	IC Engine No. 1	See P/O 19704		
P/O 22386	IC Engine No. 2	See P/O 19704		

Permit No.	Emissions Unit	Stationary Source Cumulative Emission Increase Since 01-01-77 lb/quarter		
		SO2	PM10	CO
P/O 22387	IC Engine No. 3	See P/O 19704		
P/O 22388	IC Engine No. 4	See P/O 19704		
P/O 22389	IC Engine No. 5	See P/O 19704		
A/C 22419	IC engine, Standby (Well F)	1	36	626
A/C 22898	IC Engine (GG)	37	67	636
A/C 22922	Trommel Screen	0	293	0
A/C 22923	IC Engine (TSB)	1	34	289
A/C 23105	IC Engine (SS1) [auxiliary on Street Sweeper No. 1]	1 (A)	20	118
	Total	45,769	14,501	226,597
	Trigger Level	≥ 13,650	≥ 7,500	≥ 49,500

(A) The facility was initially required to offset 19 lb SOx/quarter based on the original sulfur content limit of 0.05% by weight. As explained in more detail under the Calculation of Emission Offsets for SOx, PM10 and CO down below, 19 lb SOx/quarter will also have to be offset for this project.

6. CALCULATION OF EMISSION OFFSETS FOR ROC AND NOx:

The emission offset requirements from the initial permitting action for the IC engine (SS1) (P/O No. 19363) are still applicable because this permitting action is only for the replacement of expiring leased ERCs.

The following is a repeat of the language for calculating emission offsets from the previous permit evaluation (P/O No. 19363).

ROC: Emission offsets are triggered for ROC. The amount of ROC emissions that must be offset for the IC Engine (SS1) is 39 lb/quarter.

NOx: Emission offsets are triggered for NOx. The amount of NOx emissions that must be offset for the IC Engine (SS1) is 452 lb/quarter.

7. CALCULATION OF EMISSION OFFSETS FOR SOx, PM10 AND CO:

The emission offset requirements from the initial permitting action for this IC engine (SS1) (P/O No. 19363) are still applicable because this permitting action is only for the replacement of expiring leased ERCs.

The following is a repeat of the language for calculating emission offsets from the previous permit evaluation (P/O No. 19363).

SO2: Emission offsets are triggered for SO2. The amount of SO2 emissions that must be offset for the IC Engine (SS1) is 19 lb/quarter.

Note that this amount is greater than the allowable SO2 emission level of 1 lb/quarter. The SO2 emission offset remains the same as the previous permit, 19 lb/quarter, because permit language in Condition No. 13 of Permit to Operate No. 19363 requires that it remain at the 19 lb/quarter level. See permit language below.

(B) ERCs in the amount specified shall be provided at all times that the permitted equipment is allowed to operate:

1. The Permit to Operate, after issuance, shall expire on the date the ERCs expire unless replacement ERCs have been provided as specified in (2) below.
2. When ERCs are provided that have an expiration date, and prior to their expiration only, the permittee can provide replacement ERCs. The permittee shall submit a valid permit application to modify the current Permit to Operate and shall pay the required permit fees. The application shall be filed prior to the ERC expiration date such that sufficient time is available to SMAQMD staff to process the application.
   (a) The application shall be evaluated in accordance with the requirements of the current SMAQMD Rule 202 - New Source Review and SMAQMD Rule 204 - Emission Reduction Credits.
   (b) **ERCs shall be required in an amount which is the larger of:**
   (1) The originally specified amount, or
   (2) The amount specified by the current SMAQMD Rule 202 - New Source Review at the time of replacement.

PM10: Emission offsets are triggered for PM10. The amount of PM10 emissions that must be offset for the IC Engine is 20 lb/quarter.

CO: Emission offsets are triggered for CO. The amount of CO emissions that must be offset for the IC Engine is 118 lb/quarter.

COMPLIANCE WITH RULES AND REGULATIONS:

1. **H&S § 42301.6 (AB 3205) COMPLIANCE:** The proposed equipment is not located within 1000 feet of a K–12 school, therefore, California Health and Safety Code Section 42301.6 requirements for public noticing do not apply.

2. **NSR COMPLIANCE:**

Rule 202 - New Source Review

Rule 202 New Source Review - 11-20-1984 version

Since Kiefer Landfill is a major source, the U.S. EPA requires the SMAQMD to document compliance with the 11-20-1984 SIP approved version of Rule 202 New Source Review. The following discussion references the 11-20-1984 version of Rule 202.

Section 301 Best Available Control Technology

This section establishes BACT limits for new installations to the following levels:

Pollutant	lb/day
ROC	150
NOx	150
SOx	150
PM	150
CO	550

BACT that is more restrictive than Federal requirements is not applicable to a "non-road" IC engine because it is precluded by a U.S. EPA law that reserves the regulation of "non-road" IC engines to U.S. EPA (and in special circumstances, the State of California Air Resources Board). The IC engine meets the Tier II Standards.

Section 302 Offset Requirements, General

This section establishes offset requirements from new or modified stationary sources with a net emissions increase exceeding:

Pollutant	lb/day
ROC	250
NOx	250
SOx	250
PM	150
CO	550

The proposed project is subject to emission offset requirements because the "net emissions increase" for the stationary source is greater than the above limits for each pollutant. Section 302.2 does not require offsets for CO if the applicant can show through the use of an ambient air quality model that the ambient air quality standards will not be violated.

Rule 202 New Source Review - 2-24-2005 version

Section 112 - Exemption - Notification Requirements The potential to emit from this emissions unit does not meet or exceed the following levels requiring public noticing pursuant to the requirements of Sections 405, 406, 407 and 409.2:

Pollutant	lb/qtr
ROC	5,000
NOx	5,000
SOx	13,650
PM10	7,500
CO	49,500

The exception to this SMAQMD Rule 202 Section 112 exemption is that noticing must take place if the proposed emission unit is subject to providing emission offsets pursuant to SMAQMD Rule 202 Section 302. Because this emission unit will be required to provide emission offsets, it is not exempted from SMAQMD Rule 202 Section 302 and the public noticing requirement does

apply.

In addition, this permit action will be processed using SMAQMD Rule 202 Section 404 *Enhanced New Source Review* and public and U.S. EPA notification is required.

The procedural requirements in SMAQMD Rule 207 Sections 401 through 408 will be used as required by SMAQMD Rule 202 Section 404 for *Enhanced New Source Review*.

Section 301 - Best Available Control Technology

A/C 23105 IC Engine (Auxiliary on street sweeper)

ROC:
NOx:
SOx:
PM10:
CO:

This is a non-road IC engine with Federally certified emissions and is not subject to BACT that is more restrictive than Federal requirements.

Section 302 - Offsets

A/C 23105 IC Engine (Auxiliary on street sweeper)

ROC: The amount of ROC offsets required for this source is 39 lb/quarter.

NOx: The amount of NOx offsets required for this source is 452 lb/quarter.

SOx: The amount of SOx offsets required for this new source is 19 lb/quarter.

PM10: The amount of PM10 offsets required for this source is 20 lb/quarter.

CO: The amount of CO offsets required for this source is 0 lb/quarter.

The amount of CO offsets required to be provided is 0 lb/quarter because the CO offset exemption requirements of SMAQMD Rule 202 Section 302.7 are met. SMAQMD Rule 202 New Source Review Section 302.7 exempts CO emissions from being offset if air quality modeling shows that the increase in the ambient concentration of CO at and beyond the property line is less than 500 $\mu g/m^3$ for an 8 hour average.

The ISCST CO modeling analysis for the initial permit under A/C No. 19363 is shown in Attachment B. As a worst case, the maximum hourly CO emission factor of 1.04 g/hp-hour (equal to 0.0286 g/sec) was used as the emission rate in the ISCST model since 8 hour averages were calculated. The ISCST model results showed that the maximum expected increase in the concentration of CO at and beyond the property line was less than 2 $\mu g/m^3$. The emissions of CO are therefore exempt from offset requirements.

Location Of Emission Offsets And Emission Offset Ratios

The applicant is proposing to obtain the emission offsets through the District's Priority Reserve Bank. In order to determine the offset ratio, a determination if a major modification has occurred will have to be made.

The following table shows all permitting actions at Kiefer Landfill since August 2006 (prior 5 years to this permitting action) that involved emission changes (does not include permitting actions such as renewal of an expiring ERC lease):

Date of Authority to Construct	Permit No.	Emission Change lb/year				
		ROC	NOx	SO2	PM10	CO
08-28-2006	19363	156	1,808	76	80	472
05-22-2008	20797 - 20801	0	0	0	0	0
11-20-2008	21097	0	0	0	0	0
05-28-2009	21893	452	1,356	24	100	304
06-15- 2010	22385 - 22389	15,112	0	0	0	0
5-17-2010	22419	241	722	1	36	626
5-3-2011	22922-22923	1,176	2,848	4	1,308	1,156
Total		16,993	6,734	105	1,524	2,558
Major Modification Applicability Level		50,000	50,000	80,000	30,000	200,000

The calculation of major modification levels for Kiefer Landfill is much less than U.S. EPA major modification applicability levels. Therefore, the offset ratio for each pollutant (NOx, ROC, SOx and PM10) is 1.0 to 1.0.

ERCs Provided

The applicant is proposing to provide ERCs consisting of leased ERCs from the Essential Public Services Account of the SMAQMD Priority Reserve Bank.

The street sweeper is eligible to obtain ERCs from the Essential Public Services Account of the SMAQMD Priority Reserve Bank. SMAQMD Rule 205 Section 204 considers "solid waste management systems, including landfill gas control or processing systems" as essential public services. Kiefer Landfill states that the use of street sweepers is required in order for them to comply with stormwater and dust control regulations that govern the operation of their solid waste management system.

The following table shows how the proposed ERCs will be applied to the emission liability

associated with the operation of the street sweeper.

Emission Reduction Credit Certificate No.	Face Value of ERC Certificates Surrendered lb/quarter				Offset Ratio	Value Applied to the Project Emission Liability lb/quarter			
	Qtr 1	Qtr 2	Qtr 3	Qtr 4		Qtr 1	Qtr 2	Qtr 3	Qtr 4
IC Engine (Auxiliary on street sweeper)									
Essential Public Services Account SMAQMD Priority Reserve Bank PXXXXXX **Lease Expires on: 10-01-2014**									
ROC	39	39	39	39	1:1	39	39	39	39
NOx	452	452	452	452	1:1	452	452	452	452
SOx	19	19	19	19	1:1	19	19	19	19
PM10	20	20	20	20	1:1	20	20	20	20

(A) The offset ratio for ROC, NOx, SOx and PM10 is 1:1 because the emission change over the five year cumulative emissions window is not a major modification.

Section 307 – Denial, Failure to Meet CEQA

The SMAQMD has developed a comprehensive permitting CEQA Guidance document. Project reviews conducted in accordance with the policy manuals contained therein have been determined to meet the CEQA criteria of ministerial and do not require additional CEQA review.

This project falls within the scope of the IC engine permitting manual and has been determined to be ministerial. No further review is required.

Section 404 - Enhanced New Source Review

This permit action will be processed using SMAQMD Rule 202 Section 404 Enhanced New Source Review. The procedural requirements in SMAQMD Rule 207 Sections 401 through 408 will be used. A public notice will be published in the Sacramento Bee requesting comments within a 30 day review period. The U.S. EPA Region 9 will have a 45 day review period.

The use of the Enhanced New Source Review process will allow this permit action to be incorporated into the facility's Title V permit through a Title V administrative permit amendment (see SMAQMD Rule 207 Section 202.5).

Sections 405-408 – CARB, EPA, and Public Notification:

No emissions from the IC engine exceed the exemption level specified in Rule 202, Section 112. However, offsets are required for permitting, which triggers Public Noticing under the provisions of Rule 202, Section 112.

3. **LEASED ERC PERMIT CONDITION COMPLIANCE:**

Condition No. 13 of P/O No. 19363 requires that when leased ERCs are expiring and being

replaced, the ERC requirements will be evaluated based on the current SMAQMD Rule 202 - New Source Review. The following is a discussion of the ERCs required by the current SMAQMD Rule 202.

The previous permitting action for P/O No. 19363 was conducted on August 28, 2006. The version of SMAQMD Rule 202 on that date is the same as the version of SMAQMD Rule 202 on this date. The current offset amounts are calculated in the same manner as the previous offset amounts.

4. **PSD COMPLIANCE:**
A PSD analysis is not required because there are no emissions of an attainment pollutant that exceed the following levels:

Attainment Pollutants within the SMAQMD	Primary PSD Applicability Level (A) (i.e. federal PSD "major" source level) tons/year	Secondary PSD Applicability Level (B) (i.e. federal PSD "significance" level) tons/year
NO_2	≥ 250	≥ 40
SO_2	≥ 250	≥ 40
CO	≥ 250	≥ 100

(A) Except that the "major" source level is ≥ 100 tons/year for stationary sources listed in 40 CFR 51.166(b)(1)(i)(a).
(B) If emissions of one of the "attainment" pollutants qualifies the stationary source as a federal PSD "major" source, then PSD is also applicable to any other "attainment" pollutant that exceeds the federal PSD "significance" level for both (1) the project emissions increase **and** (2) the facility net emissions increase.

5. **PROHIBITORY RULES COMPLIANCE:**

Rule 401 - Ringelmann Chart
The proposed equipment is expected to comply with the Ringelmann No. 1 or 20% opacity requirement of this rule.

Rule 402 – Nuisance
The proposed equipment is not expected to cause a public nuisance and will not emit any significant levels of toxic air contaminants.

A health risk was performed for this individual engine under the evaluation for A/C 19363. The Health risk analysis was performed using the ISCST3 air quality dispersion model. The health risk was performed for diesel particulate matter (Appendix A) and to determine the 8-hr carbon monoxide concentration (Appendix B) from this engine. The results were the following:

Maximum Single IC Engine Fenceline Cancer Risk:
[(Auxiliary IC engine for the street sweeper only (under A/C 19363)]

a. The calculation uses a residential increased cancer risk assumption by representing a

person at the fenceline of the property for 24 hours/day, 7 days/week and 70 years in a 70 year lifetime.

b. Maximum fenceline concentration: approximately 6,400 feet northeast from the exhaust stack is 0.003 ug/m3.

c. Risk = (C) x (U) x (R) x (O) x (BRF)
= (0.003) x (0.0003) x (70/70) x (1) x (1.25)
= 1.1 in 1 million increased cancer risk

The increased cancer risk due to the emissions from the proposed auxiliary IC engine by itself is less than the maximum allowable increased cancer risk that SMAQMD policy has established of 10 in 1 million.

It should be noted that the calculation of the ambient DPM concentrations and the subsequent calculation of increased cancer risk used several worst case assumptions. Therefore, the increased cancer risk calculated represents the upper bound increased cancer risk. The **actual** increased cancer risk would be less than that calculated.

TBACT Requirements

SMAQMD policy requires the use of TBACT if the increased cancer risk is 1 in 1 million or greater for the permit unit. The increased cancer risk for the proposed IC engine is 1.1 in 1 million. TBACT for the IC engine will be the U.S. EPA Tier 2 PM standard for non-road IC engines because the SMAQMD cannot require stricter standards as discussed earlier in this engineering evaluation.

8-hr CO Concentration

The highest 8-hr CO concentration was within the facility's boundary at 9.27 µg /m^3 and less than 2 µg/m^3outside of the facility's boundary (as shown in Appendix B).

Facilitywide Risk:

A health risk analysis was performed on the evaluation for a new trommel screen and associated IC engine (A/Cs 22922 & 22923, respectively), which show the cumulative risk from all of the HAP emitting units at this facility. The results were the following:

Modeling Results:

Receptor (Worst Case)	TAC	Excess Cancer Risk (Persons/ million)	Acute Hazard Index	Chronic Hazard Index	Distance from stack (feet)	Direction
Residential	Total Diesel PM from all engines (#'s 21893, 19363, 21262, 21792 & 22419) from HRA for A/C 22419	3.8	N/A	0.002	3,066	NE

Receptor (Worst Case)	TAC	Excess Cancer Risk (Persons/ million)	Acute Hazard Index	Chronic Hazard Index	Distance from stack (feet)	Direction
	ROC (from A/Cs 22385-22389 as used in project for A/C 22419)	0.24	0.51	0.1	N/A	N/A
	Diesel PM (A/C 22923)	0.095	N/A	0.00005	12,556	NW
	Total	4.2	0.51	0.102	N/A	N/A
Non-residential	Diesel PM (from project for A/C 22419)	1.1	N/A	0.001	4,514	NE
	ROC (from A/Cs 22385-22389 as used in project for A/C 22419)	N/A	N/A	N/A	N/A	N/A
	Total Diesel PM from all engines (#'s 21893, 19363, 21262, 21792 & 22419) from HRA for A/C 22419	1.683	N/A	0.00157	2,746	NW
	Total	2.8	N/A	0.002	N/A	N/A

The health risk for this project is considered acceptable to the SMAQMD because the Excess Cancer Risk for the facility does not exceed 10 in 1 million and the Chronic Hazard Index is less than one for all cases. Furthermore, the ambient carcinogen concentrations calculated by the model as well as the calculation for the Excess Cancer Risk were estimated by using worst case scenario assumptions. Therefore, the Excess Cancer Risk calculated for the project represents the upper bound risk. The **actual** risk is expected to be less.

Rule 406 - Specific Contaminants

Emissions from the IC engine are expected to comply with the emissions limit of 0.2% by volume sulfur compounds as SO2 and 0.1 grains/dscf of other combustion gases calculated at 12% CO2 as shown below:

Diesel fuel F-factor	=	9,190 dscf/MMBTU at 0% O2
Molecular Weight of SO2	=	64 grams/mole
Standard Molar Volume	=	0.8493 dscf/mol (at 68 degrees F and 1 atm)
SO2 Emission Factor	=	0.005 grams/hp-hour
PM Emission Factor	=	0.18 grams/hp-hour
Engine Efficiency	=	35% (assumed)
Outlet Carbon Dioxide	=	12% (assumed)

PM10 concentration (combustion contaminants):

= IC engine PM10 mass emission rate (grains/hour)
IC engine volumetric combustion gas flow rate (ft3/hour)

= (0.18 grams PM10/hp hour) (15.43 grains/gram) (99 hp)
(99 hp)(2546 BTU/hp hour) (1 BTU input/0.35 BTU output) (9190 E-6 ft3/BTU)

= 275 grains/hour
6618 ft3/hour at 0% O2 by definition of F factor

= 275 grains/hour
23443 ft3/hour at 15% O2 actual operating condition

= 0.01 grains/ft3 at 12% CO2

SO2 Concentration (% SO2 by volume):

= IC engine volumetric SO2 emission rate (ft3/hp hour)
IC engine volumetric combustion gas emission rate (ft3/hp hour)

= (0.005 grams SO2/hp-hour) (0.8493 ft3/mole) (1 mole/64 grams) (99 hp)
(99 hp) (2546 BTU/hp hour) (1 BTU input/0.35 BTU output) (9190 E-6 ft3/BTU)

= 0.0066 ft3/hour
6618 ft3/hour at 0% O2 by definition of F factor

= 0.216 ft3/hour
23443 ft3/hour at 15% O2 actual operating condition

= 0.00002% SO2 by volume

Rule 412 - Stationary Internal Combustion Engines Located At Major Stationary Sources of NOx

This rule limits the NOx concentration from IC engines of this type to 65 ppmvd NOx at 15% O2. In addition, the rule limits the CO concentration from IC engines of this type to 4000 ppmvd CO at 15% O2.

Section 114 exempts non-road engines from the requirements of the rule. The proposed auxiliary IC engine for the street sweeper meets the requirements specified for a non-road IC engine as defined in SMAQMD Rule 412 Section 212. SMAQMD Rule 412 requirements are therefore not applicable.

Rule 420 - Sulfur Content of Fuels
The State of California regulated sulfur content of diesel no. 2 fuel (<0.0015%). Therefore, the IC engine will comply with the 0.5% sulfur content by weight requirement of this rule.

6. NSPS COMPLIANCE:

40 CFR 60 Subpart IIII – Standards of Performance for Stationary Reciprocating Internal Combustion Engines

The NSPS states, in 40 CFR 60 Section 60.4219, that "non-road" IC engines are not "stationary" IC engines and therefore the NSPS is not an applicable requirement.

7. NESHAP COMPLIANCE:

40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The NESHAP states, in 40 CFR 63 Section 63.6585(a), that "non-road" IC engines are not "stationary" IC engines and therefore the NESHAP is not an applicable requirement.

8. ATCM COMPLIANCE:

Airborne Toxic Control Measure For Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater [California Code of Regulations, Title 17, begin at Section 93116]:

This IC engine is required to comply with the following requirements of this ATCM.

[Section 93116.3(a)]

(a) Diesel-fueled portable engines shall only use one of the following fuels:
  (1) CARB diesel fuel; or
  (2) Alternative diesel fuel that has been verified through the Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines; or
  (3) CARB diesel fuel utilizing fuel additives that have been verified through the Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines.

The permit will have a condition that the diesel fuel combusted by the IC engine meet the above requirements

[Section 93116.3(b)]

(b) Diesel PM Standards
  (1) Requirements for in-use portable diesel-fueled engines
    (A) Except as provided in sections 93116.3(b)(1)(B) and 93116.3 (b)(4) of the ATCM, starting January 1, 2010, all portable diesel fueled engines shall be certified to meet a federal or California standard for newly manufactured non-road engines pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations (that is, certified to Tier 1, 2 or 3 non-road engine standards).

This IC engine is certified to Tier 2 standards by U.S. EPA and complies with this section of the ATCM.

RECOMMENDATION:

The proposed modification should comply with all applicable SMAQMD, CARB and U.S. EPA rules and regulations.

1. **PRELIMINARY DECISION** - Propose that an Authority to Construct be issued to Kiefer Landfill, Department of Waste Management and Recycling, Municipal Services Agency, County of Sacramento with the conditions on Authority to Construct No. 23105.

2. **NOTICING FOR ERC USE** - Following the procedures in SMAQMD Rule 202 Section 405:

   a. Publish a public notice in the Sacramento Bee newspaper and request comments within the 30 day review period regarding the use of ERCs for the project.

   b. Transmit to the U.S. EPA Region 9 the proposed Engineering Evaluation and Authority to Construct and request comments within the 30 day review period.

3. **ENHANCED NEW SOURCE REVIEW PROCESSING** - Following the procedures in SMAQMD Rule 207 Sections 401 through 408:

   a. Publish a public notice in the Sacramento Bee newspaper and request comments within the 30 day review period regarding the preliminary decision to issue the Authority to Construct.

   b. Transmit to the U.S. EPA Region 9 the proposed Engineering Evaluation and Authority to Construct and request comments within the 45 day review period.

4. Finalize A/C No. 23105 after the close of the U.S. EPA Region 9 and public comment periods by making any necessary changes due to the comments received.

Refer to conditions in Authority to Construct No. 23105

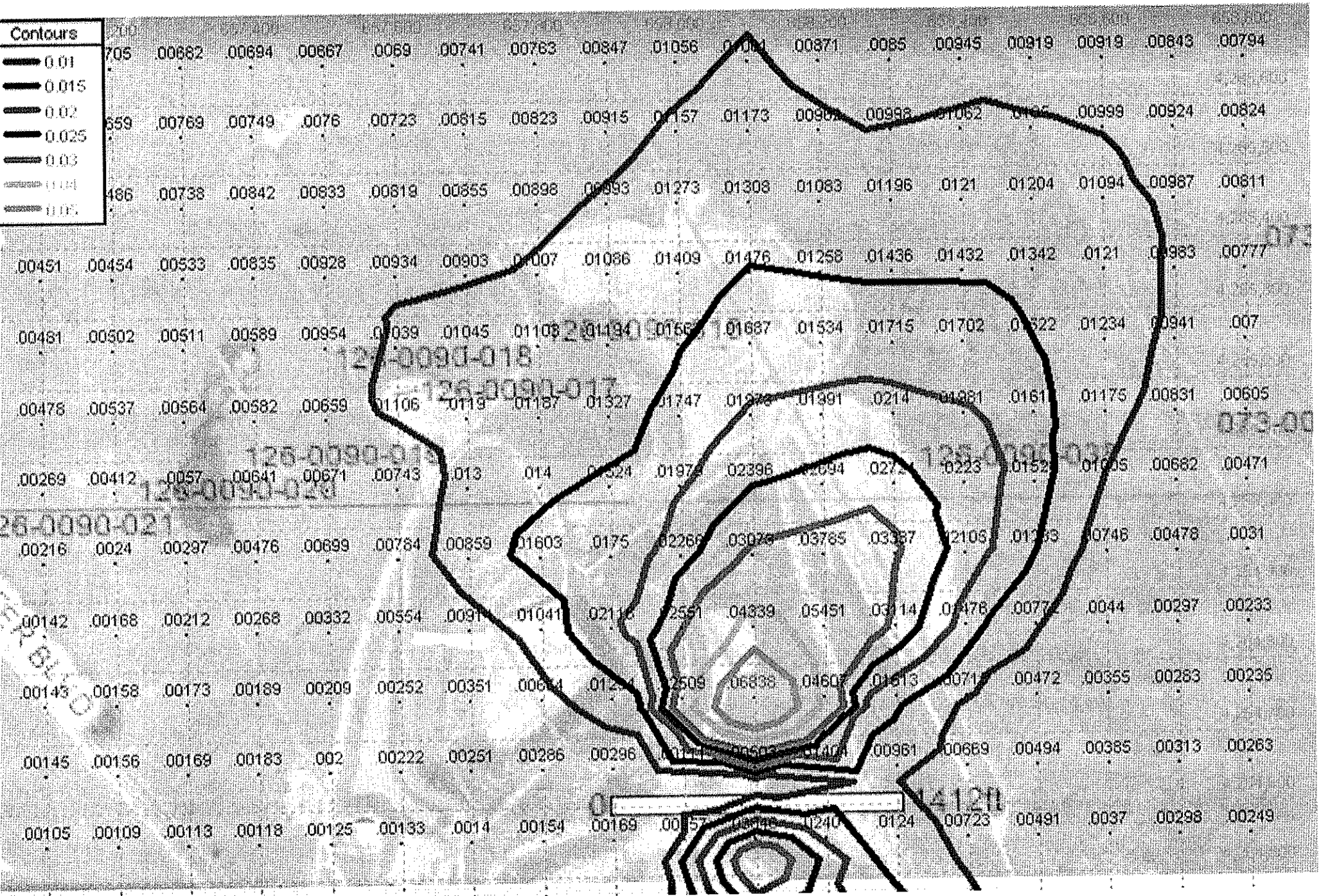
REVIEWED BY: _____ **DATE:** 8-4-11

Attachment A – ISCT Modeling Analysis for: Diesel Particulate Matter (DPM) Annual Average Concentation
Attachment B - ISCT Modeling Analysis for: Carbon Monoxide 8-Hour Concentration

ATTACHMENT A

ISCT Modeling Analysis for:

Diesel Particulate Matter (DPM) Annual Average Concentration


Contours
0.01
0.015
0.02
0.025
0.03

NO ECHO

BEE-Line ISCST3 "BEEST" Version 9.00

Input File - L:\SSD FOLDERS\Permitting\Modeling\Modeling Projects\19363\19363 Kiefer ICE street sweeper_85_DPM.DTA

Output File - L:\SSD FOLDERS\Permitting\Modeling\Modeling Projects\19363\19363 Kiefer ICE street sweeper_85_DPM.LST

Met File - L:\SSD FOLDERS\Permitting\Modeling\Met Data\SAC85_89.ASC

*** Message Summary For ISC3 Model Setup ***

-------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 3 Warning Message(s)
A Total of 0 Informational Message(s)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 19 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 22 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 25 PPARM :Input Parameter May Be Out-of-Range for Parameter VS

****
*** SETUP Finishes Successfully ***
****

□ *** ISCST3 - VERSION 02035 *** *** Aux ICE (street sweeper) Kiefer Landfill *** 05/20/06
*** *** 15:40:15
**MODELOPTs: PAGE 1
CONC RURAL ELEV DFAULT

*** MODEL SETUP OPTIONS SUMMARY ***

**Intermediate Terrain Processing is Selected

**Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --
**Model Uses NO DRY DEPLETION. DDPLETE = F
**Model Uses NO WET DEPLETION. WDPLETE = F
**NO WET SCAVENGING Data Provided.
**NO GAS DRY DEPOSITION Data Provided.
**Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

**Model Uses RURAL Dispersion.

**Model Uses Regulatory DEFAULT Options:
1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

**Model Accepts Receptors on ELEV Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates ANNUAL Averages Only

**This Run Includes: 3 Source(s); 1 Source Group(s); and 864 Receptor(s)

**The Model Assumes A Pollutant Type of: DPM

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Anem. Hgt. (m) = 10.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 1.2 MB of RAM.

**Input Runstream File: 19363 Kiefer ICE street sweeper_85_DPM.DTA
**Output Print File: 19363 Kiefer ICE street sweeper_85_DPM.LST
□ *** ISCST3 - VERSION 02035 *** *** Aux ICE (street sweeper) Kiefer Landfill *** 06/20/06
*** *** 15:40:15
**MODELOPTs: PAGE 2
CONC RURAL ELEV DFAULT

*** POINT SOURCE DATA ***

SOURCE ID	PART. CATS.	NUMBER EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
19363	0	0.12000E-02	658060.0	4264648.0	0.0	3.05	727.59	107.01	0.08	NO	
19349	0	0.14000E-02	658055.0	4264643.0	0.0	3.05	727.59	154.00	0.08	NO	
18184	0	0.38000E-02	658055.0	4264648.0	0.0	3.05	727.59	50.30	0.25	NO	

□ *** ISCST3 - VERSION 02035 *** *** Aux ICE (street sweeper) Kiefer Landfill *** 06/20/06
*** *** 15:40:15
**MODELOPTs: PAGE 3
CONC RURAL ELEV DFAULT

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

ALL 19363 , 19349 , 18184 ,
□ *** ISCST3 - VERSION 02035 *** *** Aux ICE (street sweeper) Kiefer Landfill *** 06/20/06
*** *** 15:40:15
**MODELOPTs: PAGE 4
CONC RURAL ELEV DFAULT

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: 1 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

656098.0, 656198.0, 656298.0, 656398.0, 656498.0, 656598.0, 656698.0, 656798.0, 656898.0, 656998.0,

NETWORK

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG) OF TYPE GRID-ID
ALL	1ST HIGHEST VALUE IS	0.06838 AT (658098.00, 4264756.00, 0.00, 0.00) GC 1	
	2ND HIGHEST VALUE IS	0.05451 AT (658198.00, 4264856.00, 0.00, 0.00) GC 1	
	3RD HIGHEST VALUE IS	0.04607 AT (658198.00, 4264756.00, 0.00, 0.00) GC 1	
	4TH HIGHEST VALUE IS	0.04339 AT (658098.00, 4264856.00, 0.00, 0.00) GC 1	
	5TH HIGHEST VALUE IS	0.03846 AT (658098.00, 4264556.00, 0.00, 0.00) GC 1	
	6TH HIGHEST VALUE IS	0.03785 AT (658198.00, 4264956.00, 0.00, 0.00) GC 1	
	7TH HIGHEST VALUE IS	0.03337 AT (658298.00, 4264956.00, 0.00, 0.00) GC 1	
	8TH HIGHEST VALUE IS	0.03261 AT (658198.00, 4264456.00, 0.00, 0.00) GC 1	
	9TH HIGHEST VALUE IS	0.03114 AT (658298.00, 4264856.00, 0.00, 0.00) GC 1	
	10TH HIGHEST VALUE IS	0.03073 AT (658098.00, 4264956.00, 0.00, 0.00) GC 1	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

**MODELOPTs:
CONC RURAL ELEV DFAULT

*** Message Summary : ISCST3 Model Execution ***

---------- Summary of Total Messages ----------

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 8888 Informational Message(s)

A Total of 8887 Calm Hours Identified

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 19 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 22 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
SO W320 25 PPARM :Input Parameter May Be Out-of-Range for Parameter VS
MX W430 30419 METQA :Ambient Temperature Data Out-of-Range. KURDAT= 88062111

****
*** ISCST3 Finishes Successfully ***
****

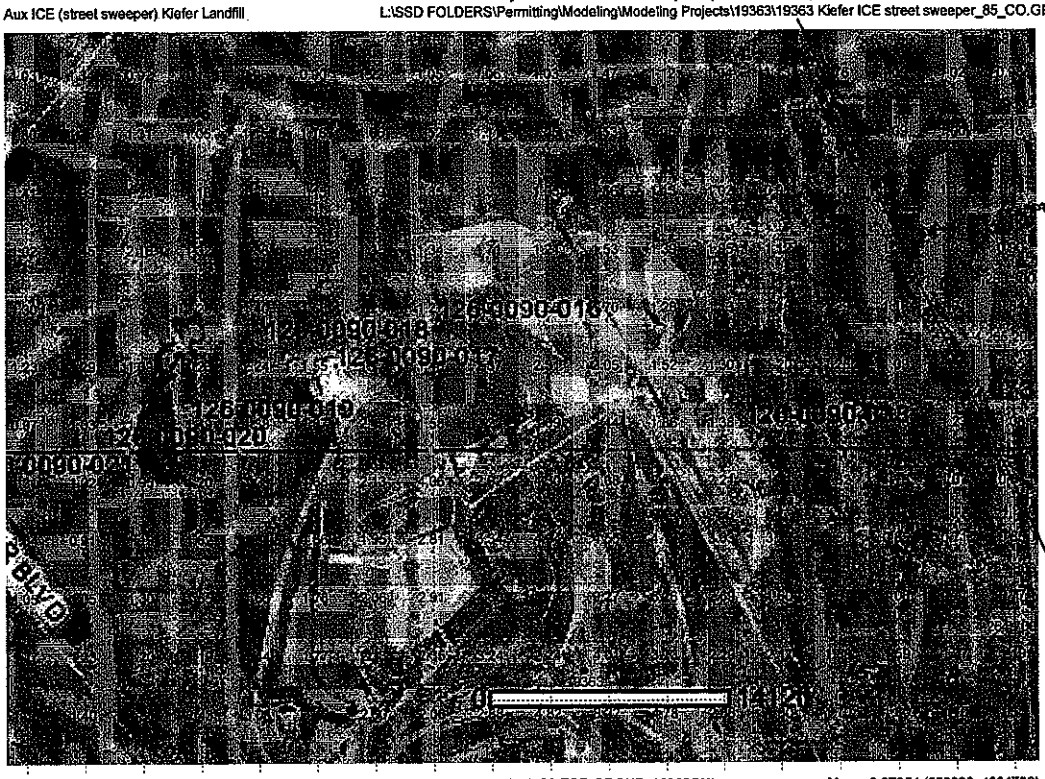
ATTACHMENT B

ISCT Modeling Analysis for:

Carbon Monoxide 8-Hour Average Concentration

Kiefer Landfill CO from Auxiliary ICE Street Sweeper (A/C 19363)

Aux ICE (street sweeper) Kiefer Landfill L:\SSD FOLDERS\Permitting\Modeling\Modeling Projects\19363\19363 Kiefer ICE street sweeper_85_CO.GRF



Scale: 1" = 207.2 Meters HIGH 1ST HIGH 8-HR VALUES FOR GROUP: 19363ONL Max = 9.27054 (658098, 4264756)

*** ISCST3 - VERSION 02035 ***
*** Aux ICE (street sweeper) Kiefer Landfill ***
*** Model Executed on 06/27/06 at 11:42:19 ***
Input File - L:\SSD FOLDERS\Permitting\Modeling\Modeling Projects\19363\19363 Kiefer ICE street sweeper_85_CO.DTA

Output File - L:\SSD FOLDERS\Permitting\Modeling\Modeling Projects\19363\19363 Kiefer ICE street sweeper_85_CO.LST

Met File - L:\SSD FOLDERS\Permitting\Modeling\Met Data\SAC85_89.ASC

Number of sources - 1
Number of source groups - 2
Number of receptors - 884

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
19363	0	0.28600E-01	658060.0	4264648.0	0.0	3.05	727.59	107.01	0.08	NO	

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
3ICE	19363 ,
19363ONL	19363 ,

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

** CONC OF CO IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZFLAG)	OF TYPE	GRID-ID
3ICE	HIGH 1ST HIGH VALUE IS	9.27054	ON 89041016:	AT (658098.00, 4264756.00, 0.00, 0.00)	GC	1

19363ONL HIGH 1ST HIGH VALUE IS 9.27054 ON 89041016: AT (658098.00, 4264756.00, 0.00, 0.00) GC 1